

Anionic Surfactants as MBAS**SM 5540 C – 2000 (2011)**

ADDITIONAL QC REQUIREMENTS FOR THIS METHOD: Certified or Accredited laboratories using this method are assessed to applicable requirements of SM 1020 and SM 5020.

Facility Name: _____ LAB ID: _____
 Assessor Name: _____ Analyst Name: _____ Inspection Date: _____

Relevant Aspect of Standards	Method Reference	Y	N	N/A	Comments
Records Examined: SOP Number/Revision/Date: _____ Analyst: _____					
Sample ID: _____ Date of Sample Preparation: _____ Date of Analysis: _____					
1) Is the Minimum Detectable Quantity (about) 10µg MBAS (calculated as LAS)?	5540C.1.e				
2) Are nonsurfactant aqueous-phase interferences removed by sublation (SM 5540B)?	5540C.1.f.				
3) Is either a spectrophotometer or filter photometer used with a 1cm or longer light path at 652nm?	5540C.2.a				
4) Is a calibration curve of at least 5 standards covering the desired concentration range prepared with a linearity of 0.995 or better?	5540C.4.a				
5) Are daily check standards run at the reporting limit and above the expected sample concentration, and a new curve prepared if not within 25% and 10% respectively?	5540C.4.a				
6) Were residues of samples purified by sublation dissolved in methanol, and heated with water (without boiling and avoiding dryness) until methanol is gone, then diluted to about 100mL with water?	5540C.4.b				
7) Were sample sizes chosen based on expected MBAS concentration (400mL:0.025-0.080mg/L; 250mL:0.08-0.04mg/L; 100mL:0.4-2.0mg/L) and diluted if above 2mg/L?	5540C.4.b				
8) Were several drops of 30% peroxide added, <i>if necessary</i> , to avoid decolorization of methylene blue by sulfides?	5540C.4.c				
9) Is sample made alkaline, per phenolphthalein indicator, by discharging pink color by addition of 1N H ₂ SO ₄ ?	5540C.4.d.1)				
10) If at any time after the addition of 25 mL of methylene blue reagent any samples lost their blue color during extraction, were such samples discarded, and extraction repeated with smaller volumes?	5540C.4.d.2) 5540C.4.d.3)				

Notes/Comments:

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11) If consistent emulsions formed during extractions with chloroform (CHCl ₃), were those emulsions broken by addition of <10 mL of isopropyl alcohol, and then was that same volume of isopropyl alcohol added to all standards?	5540C.4.d.2)				
12) Were samples extracted three times with 10mL CHCl ₃ each?	5540C.4.d.4)				
13) Were all three CHCl ₃ extracts from each sample combined into a separatory funnel, shaken for 30 seconds with 50 mL of wash solution, and allowed to settle?	5540C.4.d.4)				
14) Were extract absorbances determined at 652nm against a blank of CHCl ₃ ?	5540C.4.e				
15) Were results read in micrograms of apparent LAS (mol wt ____) from the corresponding measured absorbance and reported as “ MBAS, calculated as LAS, mol wt ____ ” using the following formula? $\text{mg MBAS/L} = \frac{\mu\text{g apparent LAS}}{\text{mL original sample}}$	5540C.5				

Notes/Comments: